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October 7, 2016
Project No. 8128.02.02

Dana Bayuk
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

Re: Siltronic Comments on Proposed Revisions to the NW Natural Gasco Groundwater Monitoring Program

Dear Mr. Bayuk:

In a September 12, 2016, memorandum to the Oregon Department of Environmental Quality (DEQ), Anchor QEA LLC (AQ), on behalf of NW Natural (NWN), proposed revisions to the NWN Gasco groundwater monitoring program, which includes the monitoring of groundwater wells and piezometers located on Siltronic Corporation (Siltronic) property. [1] Below, on behalf of Siltronic, Maul Foster & Along, Inc. (MFA) has provided a summary of Siltronic's comments on the proposed monitoring program revisions.

The monitoring reduction memorandum proposes a reduction in the quantity of well locations as well as the frequency of groundwater sample collection prescribed in the current monitoring program. The attached figure shows the wells encompassed by the DEQ-approved monitoring program on Siltronic property and which of these wells would no longer be monitored. The existing DEQ-approved monitoring program includes 38 wells on Siltronic property, whereas the proposed monitoring program includes only 11 well locations. The rationale provided in the NWN monitoring reduction memorandum is that "the nature and extent of groundwater contamination has been fully characterized throughout OU1."[2] We believe this assertion is incorrect because of significant data gaps that are due to the limited list of constituents of interest (COIs) that NWN has relied on to date, as described in Siltronic comments on the remedial investigation and risk assessment (RA) addendum annotated outline.[3]

[1] Anchor QEA. Memorandum (re: proposed revisions to the NW Natural Gasco groundwater monitoring program) to D. Bayuk, Oregon Department of Environmental Quality, Portland, Oregon, from J. Edwards and J. Renda, Anchor QEA, Portland, Oregon, and R. Ede, Hahn and Associates, Portland Oregon, September 12, 2016.

[2] OU1 is now being referred to by DEQ as the Gasco OU.

[3] MFA. Letter (re: Siltronic initial comments on NW Natural remedial investigation/risk assessment addendum annotated outline for OU1, NW Natural Gasco site) to D. Bayuk, Oregon Department of Environmental Quality, Portland, Oregon, from M. Novak and J. Peale, Maul Foster & Alongi, Inc., Portland, Oregon, September 13, 2016.

In addition, the proposed monitoring reduction is not warranted because the groundwater concentrations in the Gasco OU do not appear to be stable or declining. AQ provides hundreds of pages of concentration time series trend plots for four manufactured gas plant (MGP)-related COIs (benzo(a)pyrene, naphthalene, benzene, and cyanide) at only a subset of monitoring wells for which relevant data are available. For example, WS-16-125 was excluded from the evaluation, but is known to contain elevated concentrations of MGP constituents; this well is also located in the more contaminated portion of the alluvial aquifer.

AQ cites the log-scale plots, which span nine orders of magnitude, as showing whether the MGP COIs are stable, increasing, or decreasing at each location as an indicator of COI stability for each location. The log scale plots, which attenuate concentration fluctuations, in fact demonstrate *increasing* concentrations at many locations. Nevertheless, AQ concludes that increasing COI concentrations will not affect the identification, evaluation, or selection of remedial alternatives. It is unclear to MFA how this conclusion is consistent with DEQ guidance for completing RAs or feasibility studies; in fact, our understanding is that RAs (which must precede feasibility studies) cannot be completed if COI concentrations are not stable or declining.[4]

Siltronic agrees with NWN that monitoring should continue at wells that demonstrate changes in groundwater quality trends, possibly as a result of hydraulic control and containment (HC&C) system operation. However, the proposed monitoring frequency of once per year at extraction wells and monitoring locations is too infrequent to provide sufficient evaluation of groundwater quality response to HC&C system operation. Additionally, groundwater monitoring should also be conducted at wells that demonstrate a hydraulic response to HC&C system operation (e.g., locations instrumented with water level transducers).

AQ concludes by stating that groundwater monitoring program revisions would be proposed at each step during the feasibility study and record of decision process. This approach likely will result in a piecemeal groundwater data set of limited utility.

[4] DEQ. Human health risk assessment guidance. Oregon Department of Environmental Quality Environmental Cleanup Program, Portland, Oregon, October 2010.

We trust that these comments will assist DEQ in evaluating this groundwater monitoring proposal. Please do not hesitate to call or e-mail if you have any questions regarding these comments.

Sincerely,

Maul Foster & Alongi, Inc.

Michael R. Murray, RG, EIT
Project Environmental Scientist

James G.D. Peale, RG
Principal Hydrogeologist

Attachment: Figure

cc: (electronic): Myron Burr, Siltronic Corporation
Ilene Munk, Foley & Mansfield
David Rabbino, Jordan Ramis
Henning Larsen, DEQ
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FIGURE

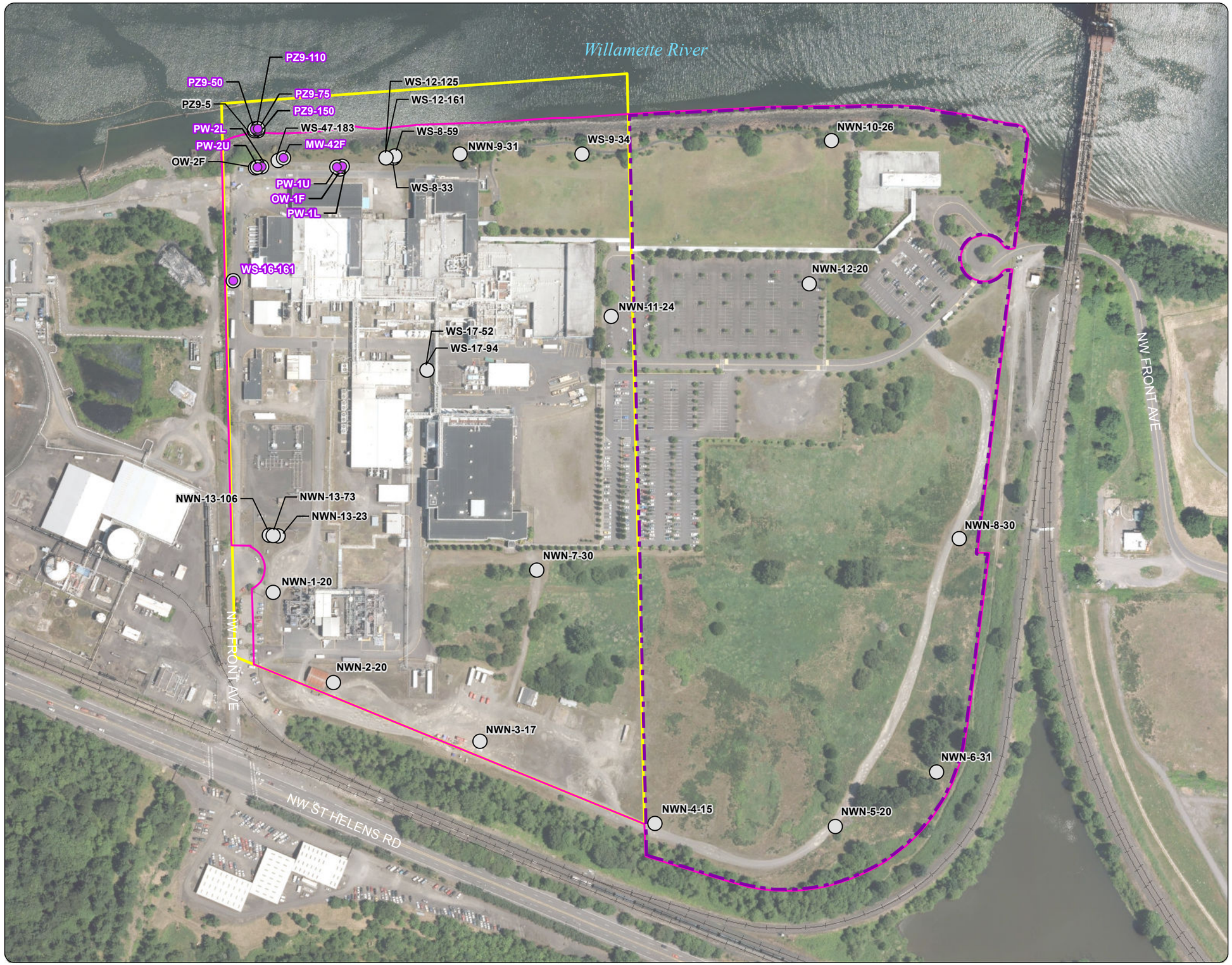

Figure
Monitoring Well Locations

Siltronic Corporation
Portland, Oregon

Legend

- DEQ-approved monitoring program wells
- Wells proposed by NW Natural for a reduced monitoring program
- Allen Tract Boundary
- Siltronic OU
- Siltronic Property
- Railroad

0 125 250
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online

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